



Peer Exchange Call Series:

Diversity and Inclusion in Residential Energy

Efficiency: What's Being Done & How Is It Working?

January 28, 2021

Agenda and Ground Rules

- Agenda Review and Ground Rules
- Opening Poll
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers:
 - **Dan Moncrief**, National Association of Minority Contractors
 - **Nancy Zarenda**, Hispanics in Energy
 - **Molly Podolefsky**, Guidehouse
- Open Discussion
- Closing Poll and Announcements

Ground Rules:

1. **Sales of services and commercial messages are not appropriate** during Peer Exchange Calls.
2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.

Better Buildings Residential Network

Join the Network

Member Benefits:

- Recognition in media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

Commitment:

- Members only need to provide *one number*: their organization's number of residential energy upgrades per year, or equivalent.

Upcoming Calls (2nd & 4th Thursdays):

- Feb 11: Passing the Test: How Are Residential Efficiency Cost-Effectiveness Tests Changing?
- Feb 25: Windows: What Are Thin Triples and Other Key Advances in Efficiency?
- Mar 11: Carrying the Load: What Is the State of Load Flexibility and Energy Efficiency?

Peer Exchange Call summaries are posted on the Better Buildings [website](#) a few weeks after the call

For more information or to join, for no cost, email bbresidentialnetwork@ee.doe.gov, or go to energy.gov/eere/bbrn & click Join



Dan Moncrief
National Association of Minority Contractors



Building on the Legacy

Diversity and Inclusion in Residential Energy Efficiency: What's Being Done & How Is It Working?

January 28, 2021





Dan Moncrief, III
NAMC National President

Current National President of the National Association of Minority Contractors. For more than a decade, he has served as the visionary President & Chief Executive Officer of McDaniel's Construction Corporation, Inc. The company provides construction expertise primarily in the areas of heavy highway construction including roads and bridges, new building and commercial renovations, asphalt paving & environmental services. The firm has become one of Ohio's prominent construction contractors, meeting client demands for timely and efficient project completion at or under budget. Mr. Moncrief's activities center around organizational management, strategic planning, contract procurement, marketing and fiscal oversight. His community commitment & industry knowledge has spurred his advocacy on behalf of minority businesses.

As a founding member of OBAAO (Ohio Businesses Which Are African American Owned), the Buckeye Contractors Association and the Urban Business Professional Association (UBPA), Mr. Moncrief has played an instrumental role in the fight for reinstatement of Ohio House Bill 584 and ensuring that existing legislation and policies effectively address the needs of minority businesses. In recognition of his work and dedication, he was honored as the 1998 recipient of the Advocate of the Year Award from UBPA and the 2000 Minority Business of the Year Award from the City of Columbus Equal Business Opportunity Commission. Currently, Mr. Moncrief is a member of the Central Ohio Transit Authority's Disadvantaged Business Enterprise Advisory Committee, the National Associations of Minority Contractors and the Airport Minority Advisory Council. He has served as the 1999 President of the Columbus Chapter of the Ohio Contractors Association and holds membership in the Columbus Builders Exchange.



Joseph Debro and Ray Dones, NAMC
Founders (left to right)

The NAMC Mission

Founded in Oakland, California in 1969 by Ray Dones and Joseph Debro, NAMC is the oldest minority construction trade association in the United States. Members include more than 50 Hall of Fame members and Legacy Contractor Builders and a combined annual project capacity of over a billion dollars nationally. The association represents the interests of over 30 million skilled minority workers across the country.

Through a network of 21 local chapters and in collaboration with strategic and corporate partnerships, NAMC assists members with building capacity by providing access to opportunity, advocacy, and contractor development training.



Trades Needed for Residential Energy Efficient Housing: New Construction and Upgrades

- Electricians
- Plumbers
- Roofers
- Drywall
- Concrete Masons
- Engineers
- HVAC Technicians
- & More



How to Attract Diverse Businesses & Employees to the Clean Energy Industry

Support Diverse Businesses

- Encourage developers, investors, and builders to purchase from diverse businesses at all levels



How to Attract Diverse Businesses & Employees to the Clean Energy Industry

Support Diverse Businesses

- Require diversity goals, equity and inclusion in all contract tiers to include subcontracting and workforce hiring practices



*Steve (right) & Bryson Barnes, Founder/CEO & Son
Bryson Constructors, LLC, NAMC Atlanta Chapter*



How to Attract Diverse Businesses & Employees to the Clean Energy Industry

Support Diverse Businesses

- Provide a pathway to ownership through wholesale, retail, and logistical opportunities



How to Attract Diverse Businesses & Employees to the Clean Energy Industry

Internship opportunities with majority contractors for diverse students in HBCU and other academic & technical programs

- General Contractors
- Energy Producers
- Equipment Manufacturers



*NAMC Student Chapter Program
Florida A&M University*

How to Attract Diverse Businesses & Employees to the Clean Energy Industry



Promote Academic Programs & Technical Training

- Scholarships for minority, female, and other diverse student populations attending HBCUs and other trade programs



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Dan Moncrief, III
National President



Nancy Zarenda
Hispanics in Energy

Linguistic Diversity in the United States Language Access Principles & Practices

Office of Energy Efficiency & Renewable Energy
US Department of Energy
January 28, 2021

Presenter: Nancy Zarenda
Vice President, Hispanics In Energy

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Nancy@hispanicsinenergy.com



Presentation Overview

- Language Access: What Is It & Why Is It Important?
- Linguistic Landscape of the United States of America
- Case Study: California Public Utilities Commission Adopts Language Access Principles
- Principles & Practices: Then & Now



Language Access: Key Terms



Language Access is achieved when individuals with Limited English Proficiency (LEP) can communicate effectively with your program staff and participate in your programs and activities especially regarding interactions with the general public.



Limited English Proficient (LEP) describes individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English.



Language Access Plan is a plan that establishes a strategy for ensuring meaningful access by LEP individuals to your programs and activities.



Cultural & Linguistic Competence is a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations.



What Is the
Official Language
of the USA?

The United States Does not Have an Official Language

Over half the states in the US have made English an official language.

TITLE VI of the Civil Rights Act of 1964

- No person in the United States shall, on ground of race, color, or national origin, be excluded from participation in, or be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Executive Order 13166

- August 2000: Federal order mandating that recipients of federal funds provide meaningful access to limited English proficient (LEP) persons.

Linguistic Landscape of the USA

Total US population: 328 million

Residents who speak a language other than English: 67 million (20%)

Foreign-born residents in US: 45 million (14%)

Rank	Languages Spoken at Home	Total	Bilingual Share (%)	LEP Share (%)
	Total	64,716,000	60.0	40.0
1	Spanish or Spanish Creole	40,046,000	59.0	41.0
2	Chinese	3,334,000	44.3	55.7
3	Tagalog	1,737,000	67.6	32.4
4	Vietnamese	1,468,000	41.1	58.9
5	French	1,266,000	79.9	20.1
6	Arabic	1,157,000	62.8	37.2
7	Korean	1,109,000	46.8	53.2
8	German	933,000	85.1	14.9
9	Russian	905,000	56.0	44.0
10	French Creole	863,000	58.8	41.2

American Sign Language

- Around one million people use American Sign Language (ASL) as their main way to communicate.
- In US colleges and universities, ASL is the third most-studied language, outnumbered only by Spanish and French.



Languages other than English in K-12 Schools



- 50 million K-12 public school students
- 5 million (10%) do not speak English as their primary language (English language learners)
 - 76% speak Spanish followed by Arabic, Chinese, Vietnamese, and Somali.

*SE HABLA
ESPAÑOL*

Spanish - 2nd
Most Spoken
Language in
the USA

- There are 61 million Hispanic/Latino American residents in the US (18% total population).
- 41 million speak Spanish at home (13% total population), 12 million more are bilingual.
- By 2050 the US is projected to be the largest Spanish-speaking country in the world.

Questions:

- What languages are spoken in your state or service area(s)?
- How are the language and ethnic demographics changing?



Case Study: Language Access in the Utility Industry

- California Public Utilities Commission
 - Oversees regulated utilities
 - Adopted Language Access Principles
- California Utilities Diversity Council
 - Business & diverse community-driven group, advisory to CPUC
 - Developed Language Access Principles



Language Access Principles Adopted by CPUC

- The Language of Business Is the Language of the Customer.
- Public Safety must Be Addressed in All Languages.
- Recruit, Train, & Compensate for Multilingual Expertise.
- Implement Quality Indicators for Multilingual Programs & Practices.
- Measure & Monitor Customer Services & Satisfaction.
- Corporate Culture Matters.

Bienvenido a *California*



Biografías

Póngase en contacto con el
gobernador

Discursos

Por favor visite el sitio
electrónico de la Primera
Dama

English



Arnold Schwarzenegger, el Goobernador de Todos

Bienvenidos a mi página electrónica, donde puede enterarse de lo que mi administración está haciendo para mejorar a California. Desde hace mucho tiempo, nuestro estado ha sido el hogar de personas innovadoras, inventivas y audaces. Es un honor servir como gobernador para los 35 millones de californianos y espero que regrese frecuentemente a este sitio electrónico.



Cubertura de Fondo

Otros Recursos



Molly Podolefsky
Guidehouse

Fostering Inclusive Residential Programs

Understanding and Overcoming the Cost-effectiveness Challenges of Programs that Address Equity

January 28, 2021



Molly Podolefsky, Ph.D.—Guidehouse

Molly is a Director in Guidehouse's Energy, Science & Infrastructure practice, located in Boulder, Colorado. With a doctorate in economics, Dr. Podolefsky brings considerable experience in econometrics and experimental design to DSM engagements. Working with IOUs and municipal utilities across the country primarily in the residential space, she tackles issues around equitable access, non-energy impacts, behavior analytics, impact analysis for connected devices and EE/DSM portfolio evaluation and planning. Dr. Podolefsky also oversees a large team of data analysts and engineers based in Guidehouse's India offices and serves as a liaison between that team and North America, Europe and Middle East-based teams and clients.



Problem Statement

- Some of the most beneficial programs to communities and vulnerable populations are the most difficult to get to pass cost-effectiveness testing
- As a result, they are often cancelled or not launched in the first place, and program managers expend significant effort trying to demonstrate cost-effectiveness
- A large culprit is failure to adequately incorporate non-energy benefits (NEBs) into cost-effectiveness testing and reporting
- While measure costs are usually fully accounted for, benefits are often limited to energy and demand savings



Solution Statement

- This session will introduce you to the information, resources and tools you need to effectively advocate for equity-focused programs and challenge traditional barriers to cost-effectiveness.



“...In many cases, it’s the Non-Energy Benefits, or NEBs, that really push the analysis needle in favor of greenlighting efficiency projects. They’ve gone from important consideration to deciding factor.”

—AEP Ohio: *Efficiency’s New Tipping Point*—*Once a consideration, Non-energy Benefits are now a deal closer*

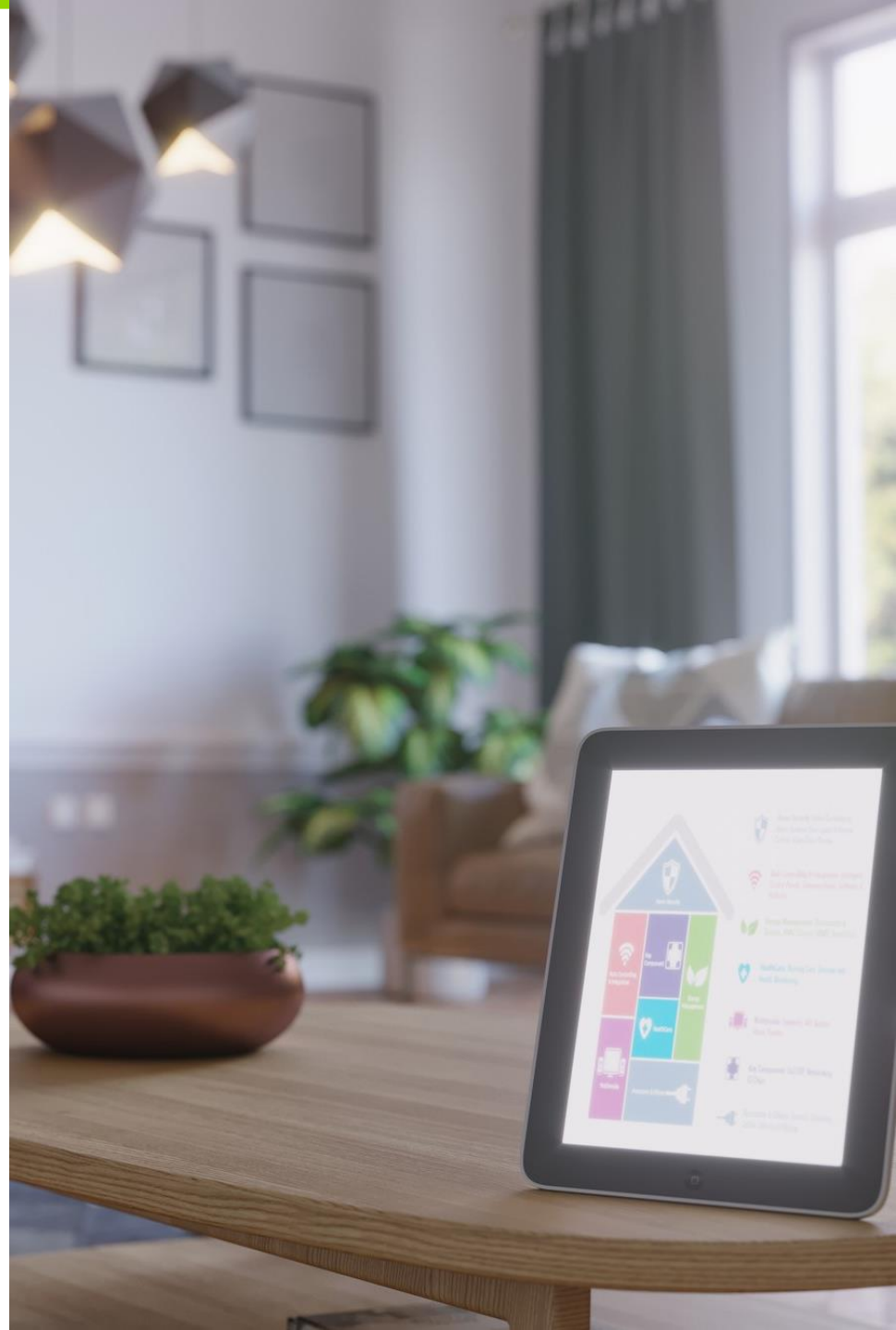
Public Goods and Positive Externalities

- **Positive Externalities**—*benefits of an activity impacting people not directly involved in a transaction.*
 - Examples: improved health, reduced risk of accident, neighborhood beautification
- **Public Goods**—*extreme case of goods with positive externalities that are non-rival and non-excludable*
 - Examples: clean air, climate stability, energy security
- Goods with positive externalities are underproduced by the market unless they are subsidized because producers do not capture the extra value the goods create in their price.



Non-energy Benefits

- Energy Efficiency measures often produce many benefits beyond energy and demand savings
- Positive benefits are called Non-energy Benefits (NEBs), though EE measures can also have negative non-energy impacts.
 - Some prefer the neutral term Non-energy Impacts (NEIs)
- NEBs are used for different purposes by different groups
 - Regulators and program administrators—use in cost-effectiveness testing
 - Implementers and program managers and trade allies—use to market EE measures
 - Customer—use as part of the decision-making process to install EE measures
 - Utilities—in marketing of programs and measures, and to fully capture the value of EE as a resource



Common EE Program NEBs by Beneficiary

- Categorization schemes for NEBs by beneficiary vary, but often include the following:
 - Participant
 - Non-participant
 - Utility
 - Society
- Example EE Measure: Shade Tree Planting
 - Participant NEBs: Bill reduction, improved comfort, property value increase
 - Non-participant NEBs: beautification of neighborhood, improved enjoyment of neighborhood/ability to exercise, property value increase
 - Utility NEBs: reduced shut-offs and re-connects
 - Societal NEBs: reduced GHG emissions, job creation, improved health
 - Public Goods: climate stability, urban livability

Common EE Program NEBs

Examples of NEBs (by Beneficiary)		
Utility System	Participants	Society and State
<ul style="list-style-type: none"> • Reduced carrying cost on arrearages • Reduced bad debt • Reduced shutoffs/reconnections • Fewer notices, calls and collection costs • Insurance premium savings • Reduce ancillary services costs • Improved power quality and reliability • Reduced subsidy payments • Lower transmission and distribution losses 	<ul style="list-style-type: none"> • Control over bill and energy decisions • Improved indoor air quality • Improved health and fewer lost days at work or school • Improved comfort • Water/wastewater bill savings • Improved property values • Improved aesthetics/appearance • Fewer shutoffs and reconnections • Lower operating and maintenance costs • Improved employee productivity and retention • Reduced tenant turnover 	<ul style="list-style-type: none"> • Economic development benefits, including job creation, increase in personal income and state GDP benefits • Improved air quality and reduced healthcare costs • Fish and wildlife impact mitigation • Attracting businesses that demand clean energy/EE (and concomitant economic development benefits) • Energy security • Preservation of affordable housing

Midwest Energy Efficiency Alliance (MEEA), NEBs Fact Sheet.

https://www.mwalliance.org/sites/default/files/media/NEBs-Factsheet_0.pdf

Cost-effectiveness Testing for EE Programs and Measures

- There are 5 basic cost-effectiveness tests used for EE programs, as established in the California Standard Practice Manual:
 - PCT—Participant Cost Test
 - PACT/UCT—Program Administrator Cost Test
 - RIM—Ratepayer Impact Measure
 - TRC—Total Resource Cost Test
 - SCT—Societal Cost Test
- No test is superior—each test serves a slightly different purpose and takes a different viewpoint
- Varied stakeholders will have different views on which perspective is most relevant

EE Program Cost Test Summary

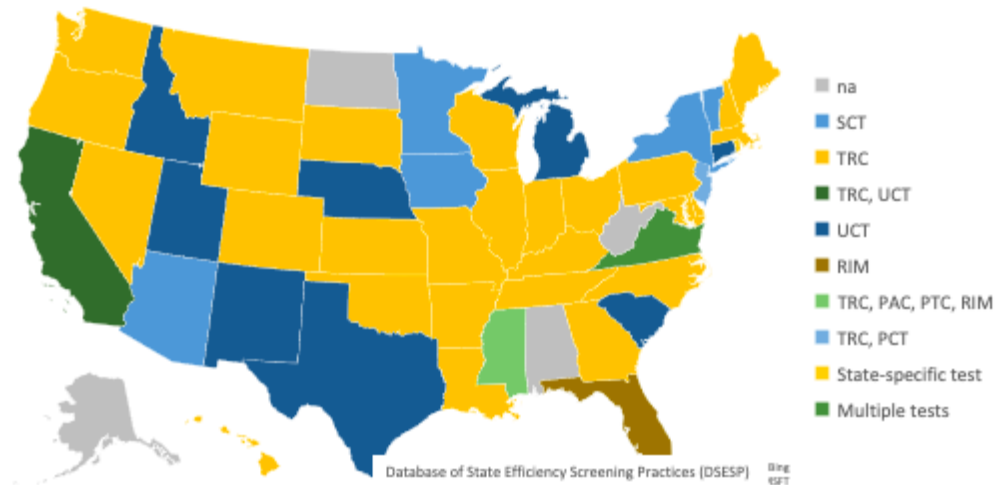
Test	Acronym	Key Question Answered	Summary Approach
Participant cost test	PCT	Will the participants benefit over the measure life?	Comparison of costs and benefits of the customer installing the measure
Program administrator cost test	PACT	Will utility bills increase?	Comparison of program administrator costs to supply-side resource costs
Ratepayer impact measure	RIM	Will utility rates increase?	Comparison of administrator costs and utility bill reductions to supply-side resource costs
Total resource cost test	TRC	Will the total costs of energy in the utility service territory decrease?	Comparison of program administrator and customer costs to utility resource savings
Societal cost test	SCT	Is the utility, state, or nation better off as a whole?	Comparison of society's costs of energy efficiency to resource savings and non-cash costs and benefits

California Standard Practice Manual, CPUC.
https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/CPUC_STANDARD_PRACTICE_MANUAL.pdf

EE Program Cost-effectiveness Testing by State

- E4theFuture's NESP Database provides detailed information on cost-effectiveness testing by state.
- 46 states plus D.C. have formal ratepayer funded EE programs that must pass cost-effectiveness tests
 - TRC— 27 states
 - SCT—5 states + DC
 - UCT—8 states
 - RIM—FL
 - State-specific tests —RI
 - TRC, UCT —CA
 - TRC, PCT —NJ
 - TRC, PTC, PAC, RIM —MI
 - Multiple tests —VA

State Primary Cost-effectiveness Test



August 2020:

<https://www.nationalenergyscreeningproject.org/state-database-dsesp/database-of-state-efficiency-screening-practices/>

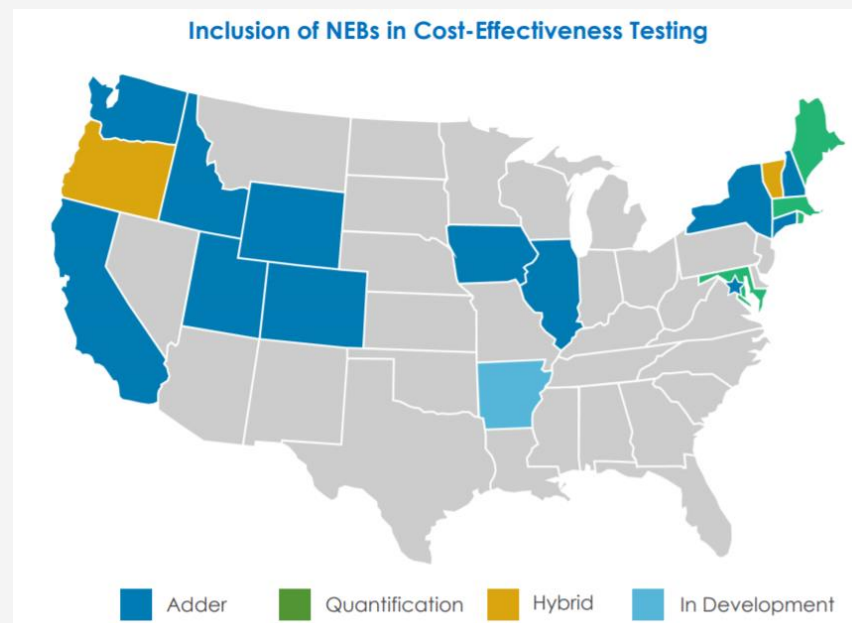
NEBs and the Challenge of Cost-effectiveness Testing

- Programs that benefit disadvantaged communities, vulnerable populations, and those having large social benefits disproportionately face cost-effectiveness challenges
- Lower-income populations do not generate large savings relative other segments so are often excluded from program participation (e.g., HERs focus on mid-hi income)
- Cost-effectiveness is often challenging for income-eligible weatherization programs because these customers typically have low energy use (income-constrained), hence improvements do not generate large savings
- Many states use a TRC that allows for limited or no inclusion of NEBs, leaving costs fully counted, but benefits undercounted



NEB Incorporation Strategies by State

- States use a variety of approaches to including NEBs in cost-effectiveness testing:
 - **Adder:** standardized dollar or percentage values included in the benefits within cost-effectiveness testing; may be differentiated by measure/program or may be general. Not disaggregated at the NEB level.
 - **Quantification:** Inclusion of specific quantified NEBs or all NEBs that can be quantified; generally applied on a measure or program basis for applicable NEBs; may be borrowed or adapted from other jurisdictions.
 - **Hybrid:** Combination of adders and quantification



Midwest Energy Efficiency Alliance (MEEA), NEBs Fact Sheet.

https://www.mwalliance.org/sites/default/files/media/NEBs-Factsheet_0.pdf

A Path Forward in AZ

- Arizona utilities must comply with EE Orders drafted by its regulator, the Arizona Corporation Commission (ACC)
- The current rules are set to expire in 2020
- The commission has issued draft rulemaking to apply from 2021 forward, which could be a ground-breaking step towards innovation and flexibility in cost-effectiveness testing of EE programs
 - Draft language has no specified cost-test (previously TRC), only the requirement that programs be “prudently implemented”
 - This could revolutionize the approach to utility program EE cost-effectiveness, opening the door to more innovative programs and approaches
 - <https://docket.images.azcc.gov/E000009536.pdf>



Overcoming CE Challenges

Case studies

DTE Energy Income-eligible Health & Safety Pilot

- Motivation
 - Offer a program that allows for remediation measures even when there are significant structural issues that would usually render the property unfit for weatherization (e.g., whole in wall)
- Approach
 - Conducting primary research on NEBs attributable to “above and beyond” health and safety measures
 - If NEBs found to be statistically significant, will include in CE testing



Overcoming CE Challenges

Case studies

Arizona Public Service (APS) Low Income Weatherization

- Motivation
 - Offer low-income weatherization program to customers without diverting money annually to demonstrate cost-effectiveness or possibly facing periodic program shut-downs
- Approach
 - Submit request in Implementation Plan to regulator to show cost-effectiveness one time, and thereafter assumed
 - As a result, is not required to demonstrate cost-effectiveness annually



Overcoming CE Challenges

Case studies

California IOU Energy Savings Assistance Program

- Motivation
 - Offer income-eligible weatherization program to customers with the ability to offer as many beneficial measures as possible to customers
- Approach
 - Apply California Low Income Public Purpose Test (LIPPT) to assess cost-effectiveness for low-income programs from a public benefits perspective
 - “LIPPT is designed to include a broader range of non-energy benefits obtained across a broad segment of the “public...”
 - Create a statewide NEBs tool populated by rigorously researched NEB values applied to specific measures within programs
 - Update as appropriate with new updated and researched values



RRM Working Group Cost-effectiveness Committee, *The Low-Income Public Purpose Test (LIPPT)*, 2001.

[http://liob.cpuc.ca.gov/docs/The%20Low%20Income%20Public%20Purpose%20Test%20\(LIPPT\)%20May%2025,%202001.pdf](http://liob.cpuc.ca.gov/docs/The%20Low%20Income%20Public%20Purpose%20Test%20(LIPPT)%20May%2025,%202001.pdf)

Overcoming CE Challenges

Case studies

Tucson Electric Power (TEP) Shade Trees Program

- Motivation
 - Offer affordable shade tree planting to the community which has a high share of low-income households for energy savings, beautification and community well-being
- Approach
 - Working through partnerships with local nurseries paired with internal program implementation to lower costs in short run
 - Joining workshops hosted by the regulator to address cost-effectiveness challenges and potential cost-effectiveness test redesign
 - Open communication channels with regulator helped lead to a “Prudently Implemented” cost-effectiveness requirement in new draft rulemaking language



Summary of Approaches

- Establish exemption of a specific program from CE testing
- Apply generalized NEB adder to benefits in CE testing
- Allow specific NEBs to be included in cost-effectiveness testing
- Consider NEBs as a reason to allow non-cost-effective programs to continue operating
- Run the program as a pilot, not a full program, to be exempted from CE requirements
- Offer a program on grounds that it is beneficial for customer or community engagement and satisfaction
- Aggregate or bundle programs with more cost-effective programs
- Add bulbs or other cost-effective measures to show cost-effectiveness (e.g., education programs with kits)
- Partner with state or local agencies to offer a program

- Change the cost-effectiveness test in the state or jurisdiction to include NEBs
- Change the cost-effectiveness requirement in the state or jurisdiction to demonstrating “prudently implemented”
- Look to municipal utilities like SMUD and SRP for more customer-focused approaches and programs, absent the regulatory constraints faced by IOUs

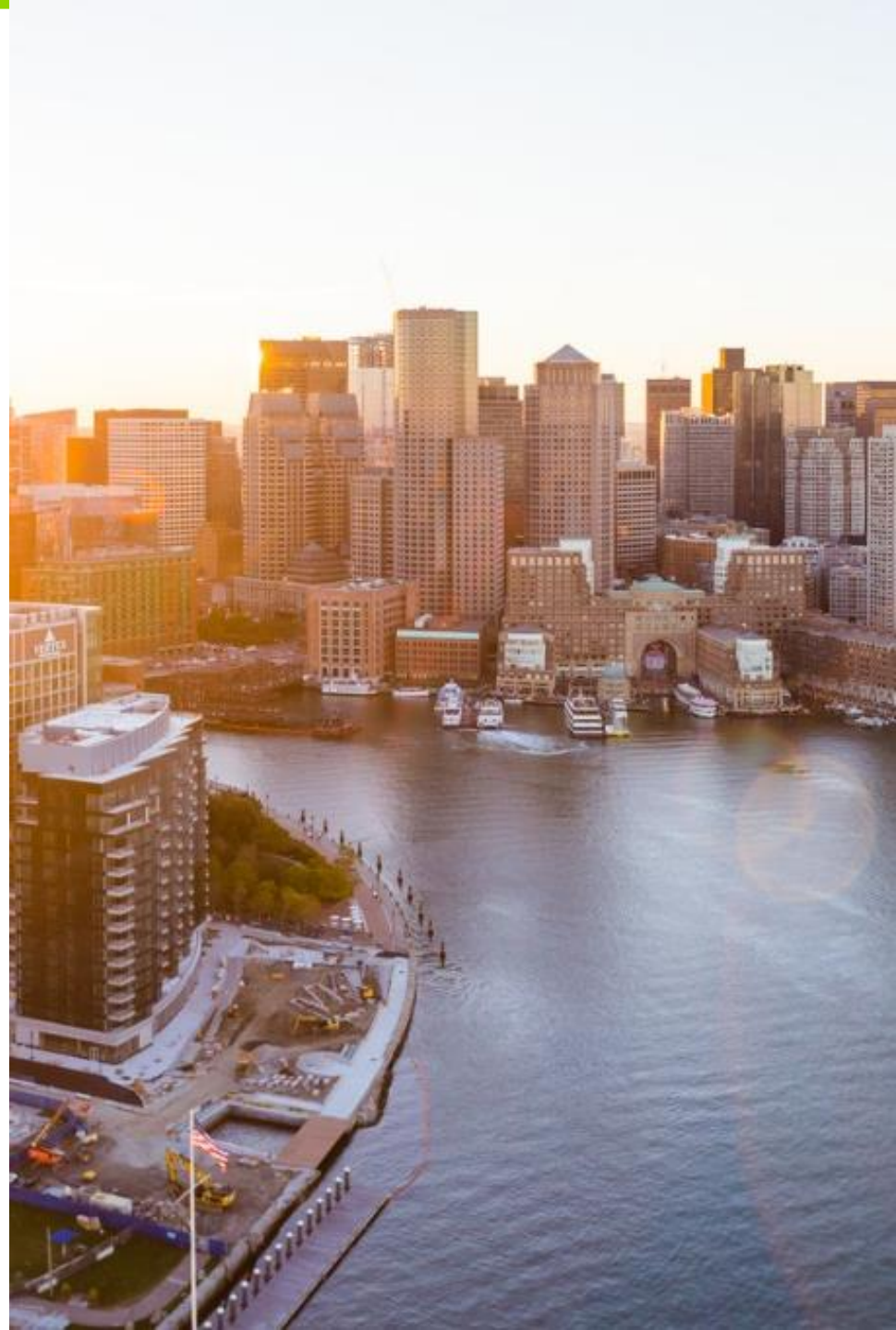


“Increasingly, benefits historically included only in the SCT are being included in the TRC in some jurisdictions. [NYSERDA] calculates the TRC for three scenarios, adding non-energy benefits in Scenario 2 ...”

—National Action Plan for Energy Efficiency—*Understanding Cost-effectiveness of EE Programs*

Takeaways

- Understanding the language and considerations around positive externalities and NEBs enables you to advocate your position clearly
- Being knowledgeable about the current state of NEBs and CE testing around the country helps you scope out your options and put them in context
- Knowing what has worked in other jurisdictions and the full range of options provides you with tools
- Awareness of counter-arguments against allowing funding for programs based on or inclusive of NEBs helps you defend your position
- Having resources to draw upon for further research allows you to tackle new challenges





Citations and Resources

AEP Ohio, Efficiency Focus: *Non-energy Benefits—Efficiency’s New Tipping Point—Once a consideration, non-energy benefits are now a deal-closer*

<https://www.aepohio.com/save/business/NonEnergy/Default.aspx>

American Council for an Energy Efficient Economy (ACEEE) State and Local Policy Database

<https://database.aceee.org/>

Arizona Corporation Commission (ACC), Staff’s Third Revised Proposed Draft Rules, Docket No. RE-00000A-18-0284,

docket.images.azcc.gov/E000004960.pdf

California Public Utilities Commission (CPUC), *California Standard Practice Manual—Economic Analysis of Demand-side Programs and Projects*, 2001

[https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy -_Electricity_and_Natural_Gas/CPUC STANDARD PRACTICE MANUAL.pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/CPUC_STANDARD_PRACTICE_MANUAL.pdf)

Commonwealth Edison (ComEd), 2018-2021 Energy Efficiency and Demand Response Plan, Settlement Stipulation Docket No. 17-0312, 2017, Illinois Commerce Commission (ICC)

www.icc.illinois.gov/docket/files.aspx?no=17-0312&docId=254601



Citations and Resources

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https://www.mwalliance.org/sites/default/files/media/NEBs-Factsheet_0.pdf

Molina, Maggie, *The Best Value for America's Energy Dollar: A National Review of the Cost of Energy Efficiency Programs*, ACEEE Report Number U1402, 2014

<https://www.aceee.org/sites/default/files/publications/researchreports/u1402.pdf>

National Action Plan for Energy Efficiency (NAPEE), *Understanding Cost-effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*, 2008

https://19january2017snapshot.epa.gov/sites/production/files/2015-08/documents/understanding_cost-effectiveness_of_energy_efficiency_programs_best_practices_technical_methods_and_emerging_issues_for_policy-makers.pdf

Contact

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New Virtual Sessions from Solar Decathlon on Innovative Homes and Energy Careers

The Solar Decathlon announced a new webinar series starting in September that will include virtual tours of innovatively designed homes and address a variety of topics from the rise in zero energy homes to clean energy careers.



U.S. DEPARTMENT OF ENERGY

SOLAR DECATHLON

Upcoming DOE Solar Decathlon Virtual Sessions

Register for Upcoming Sessions and Watch Prior Sessions at solardecathlon.gov/virtual_sessions.html

- **Zero Energy Ready Homes: New and Growing Fast**
Wednesday, February 17, 2021, 1–2 p.m. E.T.
- **The Future of Solar: A Tour of Cutting-Edge Solar Research with the U.S. Department of Energy**
Wednesday, March 17, 2021, 1–2 p.m. E.T.
- **Winning Solar Home - The DOE Solar Decathlon Build Challenge Winners**
Wednesday, April 28, 2021, 1–2 p.m. E.T.



STEM RISING

U.S. DEPARTMENT OF ENERGY
[ENERGY.GOV/STEMRISING](https://www.energy.gov/stemrising)

Explore the Residential Program Solution Center

Resources to help improve your program and reach energy efficiency targets:

- [Handbooks](#) - explain *why* and *how* to implement specific stages of a program.
- [Quick Answers](#) - provide answers and resources for common questions.
- [Proven Practices](#) posts - include lessons learned, examples, and helpful tips from successful programs.
- [Technology Solutions](#) **NEW!** - present resources on advanced technologies, **HVAC & Heat Pump Water Heaters**, including installation guidance, marketing strategies, & potential savings.



<https://rpssc.energy.gov>

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or future call topic ideas to:
bbresidentialnetwork@ee.doe.gov